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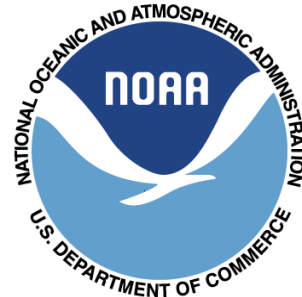
The statements, findings, conclusions, and recommendations in this report are those of the Great Lakes Renewable Energy Association (GLREA) and do not necessarily reflect the views of the MDEQ and the NOAA.

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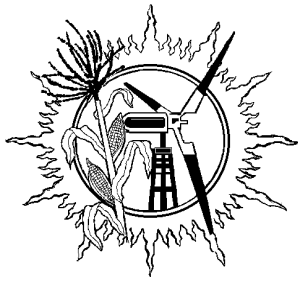
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***Since 1991, The Mission of GLREA is to increase the mainstream use of renewable energy technologies and sustainable energy practices.***

### **Guidance Manual for Wind Energy Planning**

#### **Purpose**

In an effort to assist Michigan counties seeking to develop wind energy plans, the Great Lakes Renewable Energy Association is sharing this manual on best practices.

Currently, the vast majority of Michigan counties and townships have no language, either planning language or zoning language, which specifically addresses the issue of wind energy development. While the wind industry grows at feverish rates globally, those townships and counties without adequate planning can find themselves locked out from the potential economic gains that accompany wind energy development. More importantly, without adequate planning and public education, wind turbine projects face an uphill battle to gain regulatory approval and public acceptance.

Planning for wind development does not immediately bring wind turbine activity to a particular community. However, forward planning can better equip local elected and appointed officials to handle applications and inquiries when they are received. Furthermore, adequate planning allows the local community to maintain its historical character, while embracing the new front of eclectic production. Having a workable and proper wind plan in place also sends a clear signal to wind developers and businesses that the county is prepared to accommodate wind projects.

We recommend that all counties in Michigan engage in the planning process this will be transcribed below. The potential benefits are enormous. The potential losses resulting from a failure to do so can be staggering.

#### **Preliminary Steps**

In the beginning phase of the planning process, the county should appoint a relatively small group or a chairperson to lead the project. This will provide focus and accountability to the project. Additionally, it will allow for a point of contact for all stakeholders and future collaborators on the project.

After a committee or a person is selected, master plans, comprehensive wind plans, model zoning language and other relevant documents concerning wind development from

outside counties, states and countries. The Great Lakes Renewable Energy Association is one of many resources for this information. This will provide the necessary foundation for an intelligent discussion about the character and breadth of the local wind plan.

Once the above documents have been gathered and reviewed, this committee or person should then create a comprehensive list of stakeholders who are from the local area. This list should include, but is not limited to the follow:

- Local government officials
  - Both elected and appointed
- Township and county planners
- Local non-profit agencies
  - Land use
  - Environmental
  - Consumer protection
  - Public welfare
  - And the like
- Representative from local institutes of higher education
- Local business leaders
- Local civic leaders
- Local tribal units of government
- Significant land owners
- Local utility representatives
- Any other concerned and vested party

After a list of stakeholders has been compiled, an initial meeting of stakeholders ought to be called. This meeting is an important step to begin the relationship building necessary to complete a balanced and inclusive wind plan. More importantly, this group of stakeholders can identify those parties that have been overlooked in the initial identification of stakeholders.

### **Stakeholder Discussions**

In the interest of keeping meetings focused and productive, general meetings with the public should be postponed until later stages of the planning process. Public meetings and hearings will be most productive and beneficial when a draft wind plan has been completed.

With this being said, the county ought to inform the public about the intent to develop a wind energy plan, an overview of the process the need for public input in the latter stages of the process. The best method for this communication is through press releases to local papers and word of mouth.

With this being said, stakeholders need to discuss and resolve the aim wind plan. The following questions need to be asked and addressed:

- What is the current character of the communities in question?
- What is the character that stakeholders would like to see the local community take on in the future?
- Where does the development of the wind resource in the county fit into this picture?
- Is the community interested in protecting/preserving open space and agricultural land?
- Is the community seeking to redevelop blighted properties?
- Is the county pursuing an aggressive redevelopment plan where urban areas ought to be considered for wind development?
- Should small-scale wind development be considered along side utility scale planning?
- Is the wind energy industry a central part, a complimentary part or merely a tertiary part of the overall economic and energy plan for the county?

During these meetings, specific concerns of the stakeholder group need to be expressed and documented. These specific concerns may extend beyond the above questions. Such issues that may arise include the following:

- Wildlife Issues
- Land Use Patterns
- Transmission Issues
- Property Value Impacts
- Visual Appearance
- Wetlands Impact
- Road conditions
- Water conditions
- Impacts of scenic routes
- Others to be identified

### **Exclusionary Mapping**

After appropriate focus has been determined for the planning process, the committee or chair ought to gather data and maps that include current land use patterns and projections, wetlands, roads, airports, transmission data (if available), steep slope areas, contiguous land, bio-unique area and wind resource maps. Additionally, the committee ought to coordinate with the Michigan Department of Transportation to identify and plan for scenic roads and highways.

This map should be compiled and packaged into one firm document that is easily read and digestible.

Much of the above stated information can be accessed through the following agencies:

- Michigan Department of Transportation
- Michigan Department of Environmental Quality

- County records and maps
- Michigan Natural Features Inventory
- The Michigan State University Land Policy Institute
- Tribal Governments
- Michigan Department of Labor and Economic Growth, Energy Office
- The National Renewable Energy Laboratory
- The United States Department of Energy
- ITC Transmission
- The Audubon Society
- Regional Planning Units
- The Nature Conservancy
- Michigan State University Extension

Communities should also create wind overlay areas. These areas can either be wind overlay zones or a map of those areas where wind turbine development is considered a special use.

### **Addressing Local Social and Institutional Barriers**

Addressing local concerns is equally as important as determine the physical and geographic areas that are unsuitable for wind energy development. Each local community is different, and social and institutional barriers will necessarily be different.

Upon completing mapping for the county, reconvene the stakeholder group and present exclusionary maps in this forum. Discuss the findings and then focus discussion on the local barriers to wind energy development.

It is important to use the exclusionary maps as a reference point for these discussions. Areas that might provoke the greatest resistance may already be excluded due to environmental, geographic or other reason.

It may be useful to consult the following list when working to identify local institutional and social barriers:

- Lack of public education concerning wind energy
- Lack of zoning language for specific municipalities in the county
- Public fear of environmental damage
- Public fear of perceived damage to local character
- Lack of understanding about benefits and consequences of developing wind energy
- Impacts to local scenic highways

After identifying the local barriers, discuss options to remedy these issues with stakeholders. There are many avenues to address the above stated barriers or others that may be identified during the process. A few options to remedy the above stated barriers are as follows:

- Host wind town meetings
- Convene county-wide summits and educate about wind energy
- Conduct presentations before local town boards and planning commissions
- Work with stakeholders to develop local zoning language
- Consult with Michigan Department of Transportation about scenic highways and steps for mitigation

### **Developing Language for County Wind Master Plan**

In consultation with the stakeholder group, the chair should begin crafting language that can be adopted by the County Planning Commission and the Town Board into the County Master Plan.

The chair ought to develop language that incorporates the local character and the concerns of the stakeholder committee. This language needs to be straightforward and concise.

Language should direct development to specific zones and areas, based upon input from stakeholder groups. The main point is that development needs to be guided by overarching principles.

The wind master plan needs to address the possibility of using the wind energy industry as a way to redevelop the local manufacturing and economic base. Certain communities may be able to benefit from the wind energy installations only. Others may be able to benefit from the possibility of manufacturing jobs to support the wind turbine capacity. The language should clearly state if the development of the wind energy industry in the county is specifically geared to address some or all of the following:

- Agricultural/Open Space preservation
- Redevelop rural/urban tax base
- Redevelop manufacturing capabilities and base
- Offset carbon and other greenhouse gas emissions
- Preserve local character
- Allow for community groups to offset local electricity needs (community wind)

The master plan also needs to address the institutional and social barriers that have been identified through the process. These concerns and the formalization of these concerns in an overall guidance document are important for the successful stimulus of a wind energy industry. The concerns will help guide where development is appropriate and practical. More importantly, it will allow the public to have a stake in any projects and therefore make those projects move forward more easily.

## **Public Presentation of Wind Energy Plan**

Upon completion of the wind energy plan, the document should be shared with the stakeholder group. While a formal meeting is preferred, if time and money prohibit this, electronic dissemination is acceptable.

Allow the stakeholder group to comment on the wind energy plan. After receiving comment from the stakeholder group, revise the master plan as needed.

Once all final revisions have been completed, call a public hearing to allow for public comment on the wind energy plan. An appropriate venue for the public comment is before or directly following a regular meeting of the County Planning Commission.

Once a date and time has been confirmed, invite all municipal supervisors, municipal town boards, municipal zoning and planning commissions and the county board and planning commission. Additionally, make public notice of the public hearing in the local newspapers and media outlets. Furthermore, submit press releases to all the local media and invite all concerned members of the public to attend.

Allow at least two weeks for members of the public to obtain a copy of the wind energy plan. Distribution can occur at the county offices and at select other locations throughout the county. Stakeholders can be asked to distribute the wind energy plan, for example.

Allow the public to comment at the hearing, both written and verbal. Be sure that stenographic notes are taken, as these concerns will be needed in the final version of the wind plan.

## **Developing Final Wind Energy Plan**

The public hearing will provide insight as to those areas that have been overlooked or glossed over in the planning process. Additionally, the public hearing is an important step in the process of educating the public about the potential benefits and consequences of developing a wind energy industry in the county.

A public forum also provides an opportunity to explain the difference between concerns and comments that are best addressed in the county plan, and those which are more effectively addressed later, in the county or township zoning ordinance development process.

The final wind plan should incorporate and balance all stakeholder input, public input and the needs of the county. Additionally, the plan should outline specific recommendations that will facilitate a wind energy industry in the county while addressing the concerns that have been brought to bear during the process.

Ultimately, the plan should include model-zoning language that municipalities and the county can adopt. Vetted language that will undoubtedly be reviewed and altered by local officials is vital to the success of any wind energy plan.

The final wind energy plan should then be presented to the County Planning Commission and to the County Board. It is recommended that both bodies formally adopt language that supports the use and development of wind energy as an accepted land use, where appropriate. Additionally, the County Planning Commission should formally recognize the intent and recommendations of the wind plan produced.

### **Overall Recommendations**

- Plan for development of wind energy with regard to local character and culture
- Use wind energy plan as a method to reinvigorate local economy and tax base
- Permit wind energy development as a special use in agricultural and open space zones
- Permit wind energy development in specific industrial and commercial districts
- Provide exclusionary maps as a base for discussion and development
- Keep language clear and concise
- Consult with MDOT to protect any scenic highways that may traverse the county



## **Appendix A: Summary of Steps to Complete Wind Planning**

- 1) Identify key stakeholders
  - a. Local governments and township officials
  - b. Local business leaders
  - c. Local civic leaders
  - d. Key and active citizens
- 2) Promote project through media outlets
  - a. Print and news media
  - b. Listservs
  - c. General membership lists
  - d. Invitations to local supervisors and township officials
- 3) Identify key ordinances from other communities
  - a. Adapt outside ordinances for local purpose
- 4) Allow key stakeholders to provide input building on outside master plans
- 5) Identify needs of local area and assess impacts to local economy and ecology
- 6) Identify relevant data, including, but not limited to airport, wetlands, steep slopes, transmission data, bio-unique areas, agricultural and forestland, etc.
- 7) Develop map “excluding” areas not suitable for development
- 8) Provide overlay maps of current land use and areas where wind turbine development is enabled
- 9) Identify specific local social and institutional barriers to wind development
- 10) Develop language that for township and county master plan
- 11) Develop language for township ordinances
- 12) Hold public meetings and forums to allow public input
- 13) Incorporate public comments into final wind plan
- 14) Present plan before County Planning Commission or County Board
  - a. Recommend adoption by both bodies

## Appendix B: Contact Database

First	Last	Title	Group / Business	Address	City	State	Zip	Phone	Email
Elaine	Bush		Michigan State University Extension	8840 Chippewa Hwy.	Bear Lake	MI	49614	231-889-4277	bushe@msu.edu
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Jim	Cooper		Traverse City Light and Power	1131 Hastings Street	Traverse City	MI	49686	231-922-4940	jcooper@tclp.org
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